

SEQUENCE LISTING

<110> CropDesign N.V.

<120> Stress Tolerance

<130> 4982-12

<140> 10/552,686

<141> 2005-11-21

<150> PCT/EP04/50513

<151> 2004-04-13

<150> EP 03076064.9

<151> 2003-04-11

<160> 11

<170> PatentIn version 3.2

<210> 1

<211> 1344

<212> DNA

<213> Beta vulgaris

<220>

<221> misc_feature

<222> (3)..(3)

<223> n is a, c, g, or t

<400> 1

| | | | | | | |
|-------------|-------------|-------------|-------------|-------------|-------------|------|
| cgngctgcagg | aattcggcac | gagtttcgaa | gtacccaaga | ctccaagaga | ggacgaactt | 60 |
| cagttttctct | ctctctcgaa | tcctaattct | ctctgctcaa | atccctaatt | ctctctctctc | 120 |
| acgatcgtga | agtcctctggt | tttcaactgta | taaatctatt | caaaccaattt | ctctctctctc | 180 |
| attattttcaa | tttcggtttg | ctaattcaag | gtgaatcaaa | tgtcgggcaa | tatgttttcc | 240 |
| agactttttg | gtgctaatac | tcgtgatgca | gctactactg | agactacttt | atctacatta | 300 |
| gagaaattga | atgagacact | tgaaatgcta | gagaagaaag | agcagcttct | aatgaaaaag | 360 |
| gctactgcag | aggttgaaaa | ggccaaagag | ttcacaaggg | caaagaataa | acgtgctgct | 420 |
| atacaatggt | taaagaggaa | aaggtttatac | gaacagcaag | tcgagcagg | tgggaatttt | 480 |
| caactacgaa | ttcatgatca | gatcataatg | cttgattctg | caaaagcaac | gacagagaca | 540 |
| gttgctgcat | tgagatctgg | tgctagtgtc | atgaaggcta | tgcaaaaagc | aacaacatt | 600 |
| gatgatgtgg | acaagacaat | ggatgagatc | aatgagcaga | ccgataaact | gagacagata | 660 |
| caggaggcac | tagctactcc | tgttggtgca | actgattttg | atgaggatga | attggaagct | 720 |
| gagcttgaag | aacttgaagg | agctgagttg | gaggaacaac | ttctacaacc | atttacaact | 780 |
| gccccctacg | caccaattca | tgttccagaa | ggcaagctgc | cagcaaggcc | aacaccccaa | 840 |
| aagaactctg | aggaagatga | actcgtctgc | ttacaagcag | aaatggcact | ttgaaggctt | 900 |
| ttcttttttc | atgtttataa | tcattgtccca | aagaatgga | aacgggctgg | aaaaaggaaa | 960 |
| aggcaaaagg | aaagaaaaag | aaagaaaaaa | gattgaaaa | ctttattgat | tgatggtggt | 1020 |
| atattttaagt | attgagtgtt | gatagcatct | tgttgtcatg | tactatatgc | ctatatggag | 1080 |
| tacctgttat | taatttgtaa | tgttaatgca | aattattgtc | ataccattga | tgaacaaaga | 1140 |
| tgggggctgt | aaactcttgg | ttgttttttc | gtttttcaat | tttttgtttt | cgtttttatt | 1200 |
| tttcagtcac | ctactggttc | tagtgactgg | tgacaattgc | tgtacagaga | ttttgtgtca | 1260 |
| cttgagctgc | tggtcaacag | actatgcaga | ctgtgcagatt | tataaaatca | gaaagctggc | 1320 |
| aaaaaaaaaa | aaaaaaaaact | cgag | | | | 1344 |

<210> 2
 <211> 224
 <212> PRT
 <213> Beta vulgaris

<400> 2
 Met Ser Ala Asn Met Phe Ser Arg Leu Phe Gly Ala Lys Ser Arg Asp
 1 5 10 15
 Ala Ala Thr Thr Glu Thr Thr Leu Ser Thr Leu Glu Lys Leu Asn Glu
 20 25 30
 Thr Leu Glu Met Leu Glu Lys Lys Glu Gln Leu Leu Met Lys Lys Ala
 35 40 45
 Thr Ala Glu Val Glu Lys Ala Lys Glu Phe Thr Arg Ala Lys Asn Lys
 50 55 60
 Arg Ala Ala Ile Gln Cys Leu Lys Arg Lys Arg Leu Tyr Glu Gln Gln
 65 70 75 80
 Val Glu Gln Val Gly Asn Phe Gln Leu Arg Ile His Asp Gln Ile Ile
 85 90 95
 Met Leu Asp Ser Ala Lys Ala Thr Thr Glu Thr Val Ala Ala Leu Arg
 100 105 110
 Ser Gly Ala Ser Ala Met Lys Ala Met Gln Lys Ala Thr Asn Ile Asp
 115 120 125
 Asp Val Asp Lys Thr Met Asp Glu Ile Asn Glu Gln Thr Asp Asn Leu
 130 135 140
 Arg Gln Ile Gln Glu Ala Leu Ala Thr Pro Val Gly Ala Thr Asp Phe
 145 150 155 160
 Asp Glu Asp Glu Leu Glu Ala Glu Leu Glu Glu Gly Ala Glu
 165 170 175
 Leu Glu Glu Gln Leu Leu Gln Pro Phe Thr Thr Ala Pro Thr Ala Pro
 180 185 190
 Ile His Val Pro Glu Gly Lys Leu Pro Ala Arg Pro Thr Pro Gln Lys
 195 200 205
 Asn Ser Glu Glu Asp Glu Leu Ala Ala Leu Gln Ala Glu Met Ala Leu
 210 215 220

<210> 3
 <211> 1341
 <212> DNA
 <213> Beta vulgaris

<220>
 <221> misc_feature
 <222> (934)..(934)
 <223> n is a, c, g, or t

<400> 3
 cccgcctgca ggaattcggc acgagagaaa acctgtctta tacttctcta ctttgccttt 60
 ttgtttttgt tagccaaacca atctaacca gaattgataa tcccactctt caattccctc 120
 aaaatttttt ttccaaaatt catttccact attttcagat atttcatcac taaaattctc 180
 tcgagtttaac ctaatcactc cattcttatt tcctctcgga aaaaaaccta atcaatcaac 240
 tttacgcggt ttcattctcc gatctttttc gtttccctcg aatttttttag cgaacacca 300
 ttttcgttaa atatgtttac aagggttttc ggtaaacctt aggaaggaac aacgagtgtc 360
 gttgcaacgt tagacaaatt gagtgagaca ctggaatgt tggaaaaaaa agaacaggtg 420
 cttttgaaga aggcgtgtgc tgaggttgaa aaggccaagg agttcactag agcaaagaac 480
 aaacgtgtcg ctataacttg tctgaagagg aagaggctat acgaacaaca aatagagcag 540
 cttggaaca tgcagttgag aattcatgat cagatgatac tgcctgaagg ggcaaaggca 600
 acaacagaga ctgtcgatgc attgaggtct ggtgcctcgg ctatgaaggc catgcaaaag 660
 gcaacaaaca tcgataatgt ggataaaact atggacgaga tcaatgagca gacagagaac 720
 ttaaaacaaa tacaggaagc tctctctgct ccaatcggtg cagcagctga cttttgatga 780
 ggatgacctg aaagcagagc ttgaagagct agaaggtgct gaattgaaga agcaacttat 840
 cagcccagct actactgctc ctgctgcacc agtgcagctc cctgctggaa aacaacctga 900
 cgccccctga cctcggaag aatactgctt gaanaggatg agctcgccgc gttgcaagca 960
 gagatggccc ctgtaaaaag tttttctgga ctggaataca ggagttggtc ttacatcaaa 1020
 gttagctgat aataagctaa ttattattgc tttgggtacc acctttacag gcacgtatta 1080
 cccaatcacg gataatttgg aataaaatgt gctgtgtag ttgctgtgat ttgttgatta 1140
 ggccgtagtt ctccctgtgc caggtcttga ttgcacctta ttctcgatgc aaatttcaga 1200
 tttcttata gacattgtaa tttgtgacaa aatatcgatc atttgtagc agttaaccct 1260
 tcacatatgt aaaagaata aaatacaatt cttgtatgac tttattttta ccaaaaaaaa 1320
 aaaaaaaaa aactcagagg g 1341

<210> 4
 <211> 154
 <212> PRT

<213> Beta vulgaris

<400> 4
 Met Phe Thr Arg Val Phe Gly Lys Pro Lys Glu Gly Thr Thr Ser Ala
 1 5 10 15
 Val Ala Thr Leu Asp Lys Leu Ser Glu Thr Leu Glu Met Leu Glu Lys
 20 25 30
 Lys Glu Gln Val Leu Leu Lys Lys Ala Gly Ala Glu Val Glu Lys Ala
 35 40 45
 Lys Glu Phe Thr Arg Ala Lys Asn Lys Arg Ala Ala Ile Thr Cys Leu
 50 55 60
 Lys Arg Lys Arg Leu Tyr Glu Gln Gln Ile Glu Gln Leu Gly Asn Met
 65 70 75 80
 Gln Leu Arg Ile His Asp Gln Met Ile Leu Leu Glu Gly Ala Lys Ala
 85 90 95
 Thr Thr Glu Thr Val Asp Ala Leu Arg Ser Gly Ala Ser Ala Met Lys
 100 105 110
 Ala Met Gln Lys Ala Thr Asn Ile Asp Asn Val Asp Lys Thr Met Asp
 115 120 125

Glu Ile Asn Glu Gln Thr Glu Asn Leu Lys Gln Ile Gln Glu Ala Leu
130 135 140

Ser Ala Pro Ile Gly Ala Ala Ala Asp Phe
145 150

<210> 5
<211> 1019
<212> DNA
<213> Beta vulgaris

<220>
<221> misc_feature
<222> (5)..(5)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (1001)..(1001)
<223> n is a, c, g, or t

<400> 5
cccgncgtga ggaattcggc acgagcgcgc tccccaattc tccttctctc aaagatggga 60
aacaccgaga aactaatgaa ccagatcatg gagctcaaat tcacctctaa atcacttcaa 120
cgtcaatctc gtaagtgcga gaaagaagaa aaagctgaga aactcaaatg caagaaagca 180
atcgagaaag gaaacatgga tggagctcga atttacgcgc aaaacgcaat tcgtaagcgt 240
actgaacaga tgaactactt gcgcctcgct tctgcctcgc acgcccgcgt ttgcgcgcctc 300
gatactcaag ctaagatgca aaccatcgga aaatcgatgg gatcaattg taaatcgctt 360
gagtcgtctt tgaataccgg taatttgcag aagatgtcgg agacaatgga caattttgag 420
aagcaatttg ttaatatgga agttcaggct gagtttatgg agagttctat ggctggggagt 480
acttcgcttt cgactccgga aaccgagggt aatagtttga tgcagcagggt ggcggatgat 540
tatggccttg aggtttctgt gggtttgcct caggctgctg gacatgctat tctgttccg 600
aaggcggcgg agaaggttga tggaggtgat cttaccagga ggctcgccga gctcaaggct 660
cgaggttgaa gtcaaaagga aaaaggttaa ggttttattg ataattgtt atagattagt 720
agctttactg atgatcaacc cttcgtgata tgggggtttg atgataattt gctctatat 780
atggagattt gggagctttt gaaccgataa ctgtggatgg ttttaattatg tattatattg 840
tattgttcta ttggaaaaaa aaaaaaaaaa aaaactcgag gggggggccc gtaccaagat 900
ggcctttggt ggggtgaaga aggaaaaaga cagaaaacgac ttaattacct acttgaaaaa 960
agcctgtgag taaacaggcc ccttttctt tgtcgatata ntgtaattag ttaggggggt 1019

<210> 6
<211> 204
<212> PRT
<213> Beta vulgaris

<400> 6
Met Gly Asn Thr Glu Lys Leu Met Asn Gln Ile Met Glu Leu Lys Phe
1 5 10 15

Thr Ser Lys Ser Leu Gln Arg Gln Ser Arg Lys Cys Glu Lys Glu Glu
20 25 30

Lys Ala Glu Lys Leu Lys Val Lys Lys Ala Ile Glu Lys Gly Asn Met
35 40 45

Asp Gly Ala Arg Ile Tyr Ala Glu Asn Ala Ile Arg Lys Arg Thr Glu
50 55 60

Gln Met Asn Tyr Leu Arg Leu Ala Ser Arg Leu Asp Ala Val Val Ser
65 70 75 80

Arg Leu Asp Thr Gln Ala Lys Met Gln Thr Ile Gly Lys Ser Met Gly
85 90 95

Ser Ile Val Lys Ser Leu Glu Ser Ser Leu Asn Thr Gly Asn Leu Gln
100 105 110

Lys Met Ser Glu Thr Met Asp Asn Phe Glu Lys Gln Phe Val Asn Met
115 120 125

Glu Val Gln Ala Glu Phe Met Glu Ser Ser Met Ala Gly Ser Thr Ser
130 135 140

Leu Ser Thr Pro Glu Thr Glu Val Asn Ser Leu Met Gln Gln Val Ala
145 150 155 160

Asp Asp Tyr Gly Leu Glu Val Ser Val Gly Leu Pro Gln Ala Ala Gly
165 170 175

His Ala Ile Pro Val Pro Lys Ala Ala Glu Lys Val Asp Glu Asp Asp
180 185 190

Leu Thr Arg Arg Leu Ala Glu Leu Lys Ala Arg Gly
195 200

<210> 7
<211> 1510
<212> DNA
<213> Beta vulgaris

<220>
<221> misc_feature
<222> (2)..(3)
<223> n is a, c, g, or t

<400> 7
tnnccggggc tgcaggaatt cggcacgagc tcatttctct acatcaaaaa cacaacaaag 60
agatcaccca tggcgaaga aaccataag ccagaatcaa cggtggctga agtgggtggt 120
ccagtagccg agaaaccagc tgagaagcca gctgagaagc cagttctacc acctgaagct 180
gagaaactag ctgcagctga atcagctgaa gccgagaagc cagctgattc agccgaggct 240
aagatagctc aacaagtctc attcaaagag gagactaatg ttgcaagtga gctacctgag 300
ctacatagaa aggcctctcga ggacttgaag aaacttattc aagaagccct cgagaagcac 360
gagttctctt ctctctctcc tccgcctccg cctgctccag ctaaagtga ggagaaggcg 420
gaagagaaga aagaggaaca acctccatcc accacctcca ccaccaccac caccaccacc 480
gcggtttcag atgaggttgc tgttgctcct ccatccgaag aggccccgaa aactgacgag 540
gcctctccga aagtggagga ggagcctgca aaaatagttg agcaaccacc tacaacaccg 600
gcagaagaac ctgaaccagc aaaaacacct gaggttggtg ttgctgaaga ggagaaaaat 660
ggtgaggata ttaaagaaac tatagtagtc gaggttgcgca caactacagc agcaccagta 720
ctaacagaac cagaatctgt tgaggagaca ccaaaagaag ctgaagttgt agtggaaaga 780
tcaccaaaag agccagaaga agtatcaata tggggaattc cactttcttg tgaatgaaga 840
agtgatgtaa ttctattgaa attcttaaga gcaagagatt atagagtga agatgctttc 900
actatgatta gaaatactgc tcgttgagga aaagaatttg aggttgattc ttactgttat 960
gaagatcttg gaaatgatta tgagaaagtt gtttttacac atggagttga taacaagggt 1020
cgtcctggtt gttataatgt gtttgagag tttcaaaata aggaacttta tcagaatact 1080

| | | | | | | |
|------------|------------|-------------|------------|------------|------------|------|
| ttctctgatg | cagaaaaaag | gaaaaagttc | ttgagatggt | tgattcaatt | ccttgaaaaa | 1140 |
| actattagaa | ctcttgattt | tagtcctgaa | ggaattaatt | cttttgttct | tgtaaataat | 1200 |
| ttgaagaatt | ctctctggga | tggttaagaga | gatctttaca | aagttattga | caagttttct | 1260 |
| gagattctcc | aggataatta | cccagaattt | gctgctaaac | agttgtgcat | caatgtttca | 1320 |
| tggtggtctt | ggcatacaac | tggaatctatt | tgactgtatt | tacaccaagg | agcaagagca | 1380 |
| agtttgtgtt | tgcaagccca | tctaaaaactg | ctgagaccct | tttcaagtac | atagctcctg | 1440 |
| agcaggtgcc | tggttaattt | gggtgggcaca | gcaagtttgg | cgagcatgag | ttttccctcg | 1500 |
| ctgatactgt | | | | | | 1510 |

<210> 8
 <211> 427
 <212> PRT
 <213> Beta vulgaris

<400> 8
 Met Ala Glu Glu Thr His Lys Pro Glu Ser Thr Val Ala Glu Val Val
 1 5 10 15
 Val Pro Val Ala Glu Lys Pro Ala Glu Lys Pro Ala Glu Lys Ala Val
 20 25 30
 Leu Pro Pro Glu Ala Glu Lys Leu Ala Ala Ala Glu Ser Ala Glu Ala
 35 40 45
 Glu Lys Pro Ala Asp Ser Ala Glu Ala Lys Ile Ala Gln Gln Val Ser
 50 55 60
 Phe Lys Glu Glu Thr Asn Val Ala Ser Glu Leu Pro Glu Leu His Arg
 65 70 75 80
 Lys Ala Leu Glu Asp Leu Lys Lys Leu Ile Gln Glu Ala Leu Glu Lys
 85 90 95
 His Glu Phe Ser Ser Pro Pro Pro Pro Pro Pro Ala Pro Ala Lys
 100 105 110
 Val Glu Glu Lys Ala Glu Glu Lys Lys Glu Glu Gln Pro Pro Ser Thr
 115 120 125
 Thr Ser Thr Thr Thr Thr Thr Thr Thr Ala Val Ser Asp Glu Val Ala
 130 135 140
 Val Ala Pro Pro Ser Glu Glu Ala Pro Lys Thr Asp Glu Ala Ser Pro
 145 150 155 160
 Lys Val Glu Glu Glu Pro Ala Lys Ile Val Glu Gln Pro Pro Thr Thr
 165 170 175
 Pro Ala Glu Glu Pro Glu Pro Ala Lys Thr Pro Glu Val Val Val Ala
 180 185 190
 Glu Glu Glu Lys Thr Gly Glu Asp Ile Lys Glu Thr Ile Val Val Glu
 195 200 205
 Val Ala Thr Thr Thr Ala Ala Pro Val Leu Thr Glu Pro Glu Ser Val
 210 215 220

Glu Glu Thr Pro Lys Glu Ala Glu Val Val Val Glu Glu Ser Pro Lys
 225 230 235 240
 Glu Pro Glu Glu Val Ser Ile Trp Gly Ile Pro Leu Leu Ala Asp Glu
 245 250 255
 Arg Ser Asp Val Ile Leu Leu Lys Phe Leu Arg Ala Arg Asp Tyr Arg
 260 265 270
 Val Lys Asp Ala Phe Thr Met Ile Arg Asn Thr Ala Arg Trp Arg Lys
 275 280 285
 Glu Phe Glu Val Asp Ser Leu Leu Asp Glu Asp Leu Gly Asn Asp Tyr
 290 295 300
 Glu Lys Val Val Phe Thr His Gly Val Asp Lys Gln Gly Arg Pro Val
 305 310 315 320
 Cys Tyr Asn Val Phe Gly Glu Phe Gln Asn Lys Glu Leu Tyr Gln Asn
 325 330 335
 Thr Phe Ser Asp Ala Glu Lys Arg Lys Lys Phe Leu Arg Trp Leu Ile
 340 345 350
 Gln Phe Leu Glu Lys Thr Ile Arg Thr Leu Asp Phe Ser Pro Glu Gly
 355 360 365
 Ile Asn Ser Phe Val Leu Val Asn Asp Leu Lys Asn Ser Pro Gly Tyr
 370 375 380
 Gly Lys Arg Asp Leu Tyr Lys Val Ile Asp Lys Phe Leu Glu Ile Leu
 385 390 395 400
 Gln Asp Asn Tyr Pro Glu Phe Ala Ala Lys Gln Leu Cys Ile Asn Val
 405 410 415
 Ser Trp Trp Ser Trp His Thr Thr Gly Ser Ile
 420 425

<210> 9
 <211> 2052
 <212> DNA
 <213> Beta vulgaris

<220>
 <221> misc_feature
 <222> (2049)..(2049)
 <223> n is a, c, g, or t

<400> 9
 cccgcctgca gggattcggca cgagcttcaa taaaggtag agttagagag agaaagtga 60
 ggaaggccgc ctcttttttg ggtcgtgac tattaactga aactttgtaa atctactcat 120
 ggatgaatat tccaatagaa aatcttctgg tcttgctatc tccaggagag ggctagcct 180
 tgttttaagg gactcagcgg agaacaacaa agatcggaat gttcaggttt gcagccgagt 240
 tggatgtggc agcaagtga attcagtgaa ggatgctaaa gttagctctc cgagtaaaagt 300
 caaatctcca aaaactcctt tccgttcac tgctcaagga aaagaacca ttggaagttc 360

| | | | | | | |
|-------------|------------|------------|-------------|-------------|-------------|------|
| atccagaact | ctggcttctc | ctagtccttt | taaaaaatct | ctttcagacc | ggaagaaaaa | 420 |
| actgccttct | aatcttgaca | ctgattcaga | aatgtgcagt | cttcaagatg | aatccgagga | 480 |
| agtcctctga | aagaccgcga | taaggggtta | gcccgagcca | gaagatcatg | attccattga | 540 |
| agcttcatca | tctgaagctg | ggagttccag | tccgggaccc | tctaacagat | tggaacaacg | 600 |
| aaatactcag | aggttttggg | tggggcgcca | agatttctgt | gcaagtctctg | cttcattttc | 660 |
| tttaaatata | accaaccaaa | ggcaaaagaa | tggtgggtgt | ggtgggtcta | gtgctaacag | 720 |
| gtataatctg | cgacaattaa | aatgtaactc | aatctctgac | gtgtgtccat | caggttctcc | 780 |
| gcagctctgt | gaatcaagtc | tcagttaaga | gagggacaca | ggttgttaga | agagaaatgg | 840 |
| tgaagctcag | agtagtttac | ctgtgagagg | taagaaaaat | agtggggcaa | cccaagatga | 900 |
| taggaggaat | gagatcccaa | atcgtggaat | atcaatatct | gacacaaggc | gtaccagaag | 960 |
| ctcgatctct | gggaataacg | atgtcacgtc | tgtaggaggt | cttgagatctg | tgtctagaac | 1020 |
| aaggctttca | aatcaggata | cccgggatag | attaccattg | gttgagtcac | ccctgaggaa | 1080 |
| cccattctta | cctctaccgc | agtcacaaac | tgaggaaact | gatttttagtt | tggaataatca | 1140 |
| gttctctggc | cgaactccag | ctggttcttt | aagttcttat | aatagaccag | gtggcggtag | 1200 |
| tgaacatagt | cggtcttagt | ggtctattga | tcctctatga | gctggcattg | ctcgctcttt | 1260 |
| tatgaaccgt | gataccttaa | gacagtacaa | cttagatggg | attgcagaga | tgttattagc | 1320 |
| tctagagaga | attgaacaag | aagaagatcc | aaactatgag | caattgctgt | tctggagac | 1380 |
| taactctttc | ctaggaggac | tttcttttca | tgatcagcac | agggacatga | ggctggatat | 1440 |
| tgataaatatg | tcataatgag | aactattagc | tttagaagag | agcatgggaa | ctgtaagaca | 1500 |
| gccgtgcag | aagatgattt | ggctaagtg | cttaaaaagga | acatctacca | gggtgttgta | 1560 |
| gactgtagag | aggatgagca | tgatatcaaa | tgacacatat | gccaggaaga | atatgggtgc | 1620 |
| gggggaagaag | taggaagatt | gagttgtgat | cacagctacc | acattggaat | tataaatcaa | 1680 |
| tggttagggc | tcaagaactg | tgccctatc | tgcaaggctt | ctgcataccc | ttcaacttca | 1740 |
| gcaactccgc | ctccctgaac | ttcgctgtta | tattctctcc | ttttttttcc | agtttgtaca | 1800 |
| gaccggaatc | tgtcgatttt | tatttcttca | tcagaaattt | gatgtttcta | tagatagctc | 1860 |
| tttgggtact | attttctttt | tccttatttg | tacatataat | ttctcttcta | tgtgcccaat | 1920 |
| aataatgctc | gagctgttag | aagctccagt | atgggaacag | gttcacttca | cttattttac | 1980 |
| ataaacagat | tctcaagtat | atataaatcc | ctctctctca | aaaaaaaaaa | aaaaaacccg | 2040 |
| agggggggng | cg | | | | | 2052 |

<210> 10
 <211> 504
 <212> PRT
 <213> Beta vulgaris

<400> 10
 Met Asp Glu Tyr Ser Asn Arg Lys Ser Gly Leu Ala Ile Ser Arg
 1 5 10 15
 Arg Gly Pro Ser Leu Val Leu Arg Asp Ser Ala Glu Asn Asn Lys Asp
 20 25 30
 Arg Asn Val Gln Val Cys Ser Arg Val Gly Cys Gly Ser Lys Leu Asn
 35 40 45
 Ser Val Lys Asp Ala Lys Val Ser Ser Pro Ser Lys Val Lys Ser Pro
 50 55 60
 Lys Thr Pro Phe Arg Ser Ser Ala Gln Gly Lys Glu Thr Ile Gly Ser
 65 70 75 80
 Ser Ser Arg Thr Leu Ala Ser Pro Ser Pro Phe Lys Lys Ser Leu Ser
 85 90 95
 Asp Arg Lys Lys Lys Leu Pro Ser Asn Leu Asp Thr Asp Ser Glu Met
 100 105 110

Cys Ser Leu Gln Asp Glu Ser Glu Glu Val Ser Gly Lys Thr Arg Ile
 115 120 125
 Arg Val Gln Pro Glu Pro Glu Asp His Asp Ser Ile Glu Ala Ser Ser
 130 135 140
 Ser Glu Ala Gly Ser Ser Ser Ser Gly Pro Ser Asn Arg Leu Ala Asn
 145 150 155 160
 Arg Asn Thr Gln Arg Phe Gly Leu Gly Arg Gln Asp Ser Ala Ala Ser
 165 170 175
 Ser Ala Ser Phe Ser Leu Asn Lys Thr Asn Gln Gly Gln Arg Asn Gly
 180 185 190
 Gly Gly Gly Gly Ala Ser Ala Asn Arg Tyr Asn Leu Arg Gln Leu Lys
 195 200 205
 Cys Asn Ser Ile Ser Asp Val Val Pro Ser Gly Ser Pro Gln Ser Ala
 210 215 220
 Glu Ser Ser Leu Ser Lys Lys Arg Asp Thr Gly Cys Arg Lys Arg Asn
 225 230 235 240
 Gly Glu Ala Glu Ser Ser Leu Pro Val Arg Gly Lys Lys Ile Asn Gly
 245 250 255
 Ala Thr Gln Asp Asp Arg Arg Asn Asp Tyr Pro Asn Arg Gly Ile Ser
 260 265 270
 Ile Ser Asp Thr Arg Arg Thr Arg Ser Ser Ser Pro Gly Asn Asn Asp
 275 280 285
 Val Thr Ser Val Arg Ser Arg Arg Ser Val Ala Arg Thr Arg Leu Ser
 290 295 300
 Asn Gln Asp Thr Arg Asp Arg Leu Pro Leu Val Glu Ser Pro Leu Arg
 305 310 315 320
 Asn Pro Ser Ser Pro Leu Pro Glu Ser Ser Thr Gly Gly Thr Asp Phe
 325 330 335
 Ser Leu Glu Asn Gln Phe Ser Gly Arg Thr Pro Ala Gly Ser Leu Ser
 340 345 350
 Ser Tyr Asn Arg Pro Gly Gly Gly Ser Glu His Met Arg Pro Ser Arg
 355 360 365
 Ser Ile Asp Pro Tyr Glu Ala Gly Ile Ala Arg Ser Phe Met Asn Arg
 370 375 380
 Asp Thr Leu Arg Gln Tyr Asn Leu Asp Gly Ile Ala Glu Met Leu Leu
 385 390 395 400
 Ala Leu Glu Arg Ile Glu Gln Glu Glu Asp Pro Thr Tyr Glu Gln Leu
 405 410 415

Leu Val Leu Glu Thr Asn Leu Phe Leu Gly Gly Leu Ser Phe His Asp
 420 425 430

Gln His Arg Asp Met Arg Leu Asp Ile Asp Asn Met Ser Tyr Glu Glu
 435 440 445

Leu Leu Ala Leu Glu Glu Ser Met Gly Thr Val Arg Gln Pro Cys Gln
 450 455 460

Lys Met Ile Trp Leu Ser Val Leu Lys Gly Thr Ser Thr Arg Val Leu
 465 470 475 480

Gln Ile Val Glu Arg Met Ser Met Ile Ser Asn Ala Ala Tyr Ala Arg
 485 490 495

Lys Asn Met Val Ala Gly Lys Lys
 500

<210> 11

<211> 26

<212> PRT

<213> Beta vulgaris

<400> 11

His Asp Gln His Arg Asp Met Arg Leu Asp Ile Asp Asn Met Ser Tyr Glu
 1 5 10 15

Glu Leu Leu Ala Leu Glu Glu Arg Ile Gly
 20 25